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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/821,038

04/07/2004

Shaolin Li

27592-00275-US5

9250

30678

7590

04/28/2008

CONNOLLY BOVE LODGE & HUTZ LLP

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SUITE 1100

WASHINGTON, DC 20036

EXAMINER

PHAN, TRI H

ART UNIT

PAPER NUMBER

2616

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,038	<b>Applicant(s)</b> LI, SHAOLIN	
	<b>Examiner</b> TRI H. PHAN	<b>Art Unit</b> 2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment/Arguments***

1. This Office Action is in response to the Response/Amendment filed on January 15<sup>th</sup>, 2008. Claims 26 and 32 are now canceled. Claims 1-25 and 27-31 are now pending in the application.

### ***Claim Objections***

2. Claims 25 and 31 are objected to because of the following informalities:

In regard to claim 25, the phrase “, *or nearly simultaneously*,” in line 2 should be deleted to avoid vague and unclear.

A typical reason for doing so is that such term or claim language that does not clearly set forth the metes and bounds of the patent protection desired.

Claim 31 is objected for the same objection's reason given in claim 25.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 15-18, 21-24, and 27-30 of the current application are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-8, 10-13, 20, 22-28 and 30-33 of copending Application No. 10/821,143 filed on April 7, 2004 (hereinafter refer as '1143'). Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-3, 5-8 of copending Application '1143' teach essentially circuit and method which perform method of providing data transmission between first and second access points on receiving RF signals based on the 802.11x communications protocol (see claim 6 of '1143'), selectively operating in first or second modes by monitoring the channel transmission conditions (see claim 5 of '1143') which indicate the data rate is below predetermined threshold or above nominal operating rate (see claims 2-3 of '1143'), processing RF input signals by the channel mixing matrix to extract data signal (see claim 10 of '1143') and by using HR/DSSS (see claim 11 of '1143'), transmitting the RF modulated signal by using a point coordination function 'PCF' mode to maintain timing (see claim 10 of '1143'); but fails to explicitly disclose "at least one operation in second set operation is not included in first set operation" (see claims 1, 21 of current application). However, it is

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obvious that the first set operation is different from second set operation, since the first mode is different from the second mode operation.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to include different between first and second set operations in first and second mode into the '1143' copending application's system, with the motivation being to indicate the different sets of operation between different modes, e.g. first and second modes of operation.

Claims 7-14 and 15-18 of the current application are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5-11, 13-16, 24, and 31-37 of copending Application No. 10/820,961 filed on April 7, 2004 (hereinafter refer as '0961'). Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 5-11, 24, and 31-37 of copending Application '0961' teach essentially circuit and system which perform method of providing data transmission between first and second access points using baseband processor and multi-antenna signal processing circuit on receiving RF signals, automatically selecting first or second modes based on transmission conditions (see claim 1 of '0961'), processing at separate input signals (see claims 5, 31 of '0961'), computing recovered data signal (see claims 6, 32 of '0961'), separating RF signals using space division multiple access (see claims 7, 33 of '0961'), controlling transmission signals by localized encryption (see claims 11, 37 of '0961'); but fails to explicitly disclose for data transmission in second mode, using the multi-antenna signal processing circuit "that is not used in the first operating mode" (see claims 1, 21 of current application); processing

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RF input signals by the channel mixing matrix to extract data signal (see claim 13 of '0961') and by using HR/DSSS (see claim 14 of '0961'), transmitting the RF modulated signal by using a point coordination function 'PCF' mode to maintain timing (see claim 10 of '1143') .

However, it is obvious that the baseband processor circuit is different from multi-antenna signal processing circuit, since the first operation mode is different from the second operation mode.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use different circuits for first and second operation modes into the '0961' copending application's system, with the motivation being to provide different operations by different circuits for different operation modes, e.g. first and second modes of operation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

4. Applicant's arguments filed on January 15<sup>th</sup>, 2008 with respect to claims 1-25 and 27-31 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Walton et al.** (U.S.2004/0184398) and **Jalali et al.** (U.S.6,952,454) are all cited to show devices and methods for providing suitable transmission modes for multi-channel communication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179.

**Any response to this action should be mailed to:**

**Commissioner of Patents and Trademarks**

Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300**

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tri H. Phan/  
Primary Examiner, Art Unit 2616  
April 25, 2008